

AMENDMENTS TO THE DRAWINGS

The sheets of drawings appended hereto include marked-up copies of originally-filed Figures 1 and 2 showing proposed changes in red. The proposed change to Figure 1 involves the addition of reference numeral 30 in two places to identify the rivets that serve as centering elements for annular coupling elements 22, 26, as described in paragraph [0038] of the specification as filed. The rivets support coupling elements 22, 26, so that they are rotatable relative to torque-transmitting support 20 about axis X, as recited in paragraph [0042] of the specification as filed.

The proposed changes to Figure 2 include the addition of reference numeral 23 to identify the annular, disc-shaped carrier element that together with entraining members 24 and 25 forms coupling element 22. Additionally, original reference numeral 26 has been replaced by reference numeral 22, and original reference numeral 22 has been replaced by reference numeral 26, to conform the drawings with each other and with the specification as amended herein.

Further, also appended hereto are sheets 1 and 2 of the drawings in formal form, designated as "REPLACEMENT SHEETS," and including the proposed changes identified above. Approval of the changes and entry of the REPLACEMENT SHEETS and their substitution for the originally-filed drawings is respectfully requested.

REMARKS

THE DRAWINGS

The drawings were objected to on the ground they contradict each other. Reference was made to coupling elements 22, 26 and rivets 30 as they are shown in Figures 1 and 2. In that regard, coupling element 22 is defined by and includes carrier element 23 along with entraining member 24 and 25. Similarly, coupling element 26 is defined by and includes carrier element 27 along with entraining member 28 and 29. Moreover, carrier elements 23 and 27 are each annular discs that are centered relative to axis X by rivets 30, as clarified by the changes to Figure 1. The changes to Figures 1 and 2 clarify the structural arrangement of the claimed invention.

THE SPECIFICATION

Paragraphs [0032], [0033], [0034], [0036], [0037], [0041], and [0053] have been amended. None of the amendments introduces new matter, because each of the amendments is supported by the specification, the drawings, and the claims as originally filed.

Paragraphs [0032] and [0034] have each been amended to respond to and to overcome the objections noted by the examiner in paragraphs 5a and 5b of the Office Action.

With respect to paragraph [0038] of the specification, which was objected to in paragraph 5c of the Action on the same grounds as were the drawings, the discussion above relating to what is shown in the drawings applies also to the

specification. Thus, the coupling elements 22 and 26 are not fixed to torque transmitting support 20 by rivets 30. Instead, rivets 30 serve as the centering means for the annular coupling elements, and the coupling elements are therefore rotatable relative to support 20.

The specification was also objected to on the ground that it fails to provide antecedent basis for the subject matter recited in claims 12, 18, and 20. With regard to claim 12, Figure 1 shows each of entraining members 24, 25, 28, and 29 disposed between two neighboring spring convolutions. And specification paragraph [0037] recites that entraining member 24 and 25 are “between pairs of neighboring convolutions of the springs 8, 7, respectively,” providing the antecedent basis for claim 12

With respect to claim 18, specification paragraph [0053] has been amended to provide antecedent basis for the subject matter recited in that claim.

With respect to claim 20, paragraph [0033] has been amended to recite the subject matter of that claim.

THE CLAIMS

Claims 1, 4, 6, 7, 9, 10, and 18 have been amended, and claim 3 has been canceled without prejudice or disclaimer. Further, new claim 21 has been added.

Claims 6 through 10 and 12 were rejected as not complying with the enablement requirement. Claim 6 has been amended to add the terms “motion-

transmitting” before the second occurrence of “engagement” to overcome the lack of enablement rejection.

Claim 7 has been amended to clarify that a carrier element carries at least one first and at least one second entraining member, to conform with the structure disclosed in the specification and shown in the drawings.

Claim 8 correctly recites that each of the carrier elements is turnable relative to the support. That structural arrangement is discussed above in connection with the drawing and specification objections, and that discussion clarifies the arrangement of the several elements.

Claim 9 has been amended to recite that the flange of the support abuts an end of at least one of the energy storing elements, as shown in the drawings and as referred to in paragraph [0035] of the specification.

Claim 10 has been amended to clarify that the at least one carrier element is centered relative to the support longitudinal axis, and paragraph [0042] of the specification has been similarly amended for clarification and to conform with the structure as it is shown in Figure 1.

Claims 6 through 10, 12, and 18 were rejected as indefinite. In that regard, and as noted earlier herein, claim 6 has been amended to overcome the lack of enablement rejection. Regarding claim 18, Figure 8 shows springs 61, 62, 63, and 64 that extend over an arc of approximately 90°.

Claims 1 through 6 were rejected as anticipated by the Owen ‘274 reference. As claimed in amended claim 1, the claimed damper includes coupling means for coupling end regions of coil springs, the coupling means

having carrier elements that operate to simultaneously unload a second coil spring upon relaxation of a first coil spring, so that both coil springs are equally unloaded. However, the Owen '274 structure does not include a carrier element or any other structure that causes a pair of springs to simultaneously unload. In fact, the Owen structure operates in an entirely different manner in that it causes one spring to compress while the other spring relaxes. Both coil springs are not equally unloaded as in the claimed invention. Thus, because it does not disclose the present invention, and also because it operates contrary to the operation of the claimed invention, the Owen reference also would not render the invention obvious to only of ordinary skill in the art.

Claims 2 and 4 through 6 each depend from claim 1 and therefore each of those claims is similarly patentably distinguishable over the Owen reference relied upon, and for the same reasons as are given above in connection with claim 1. Additionally, each of those dependent claims contains additional recitations that further patentably distinguish the claimed combinations of elements over the disclosure of the Owen reference.

Claims 1 through 6 and 20 were rejected as anticipated by the Wooldridge '720 reference. However the Wooldridge reference discloses an arrangement in which two disks 18, 30 are elastically coupled by two groups of springs carried by respective side-by-side arms 38. However, corresponding end regions of springs are not coupled together by a carrier element, as in the present invention as claimed in claim 1. Instead, in the Wooldridge arrangement two sets of springs are provided, a first set between disk 18 and

floating member 37, and a second set between floating member 37 and disk 30. But none of the springs are interconnected, and they operate independently, not together through the carrier element. Accordingly, the invention as claimed in amended claim 1 is neither shown in nor suggested by the Wooldridge reference.

Claims 2, 4 through 6, and 20 each depend from claim 1 and therefore each of those claims is similarly patentably distinguishable over the Wooldridge reference relied upon, and for the same reasons as are given above in connection with claim 1. Additionally, each of those dependent claims contains additional recitations that further patentably distinguish the claimed combinations of elements over the disclosure of the Wooldridge reference.

Claims 1 through 10 and 20 were rejected as anticipated by the Kern et al. '700 reference. However, as was the case with the Wooldridge reference, the Kern reference also does not show or suggest means for coupling corresponding end regions of coil springs to each other by carrier elements that operate to simultaneously unload a second coil spring upon relaxation of a first coil spring, as claimed in claim 1. Accordingly, the invention as claimed in amended claim 1 is neither shown in nor suggested by the Kern et al. reference.

Claims 2, 4 through 10, and 20 each depend from claim 1, either directly or indirectly, and therefore each of those claims is similarly patentably distinguishable over the Kern et al. reference relied upon, and for the same reasons as are given above in connection with claim 1. Additionally, each of

those dependent claims contains additional recitations that further patentably distinguish the claimed combinations of elements over the disclosure of the Kern et al. reference.

Claims 1 through 7, 12, 18, and 20 were rejected as anticipated by the Kono et al. '857 reference. That reference shows in Figures 4 and 5 a vibration damper that includes a ring member 140 having a plurality of finger sections 142. The finger sections each engage a respective coil spring 30 at a middle section, "to divide the compression spring 30 into two functioning segments." (See Kono et al., col. 6, lines 55 and 56). Thus each spring 30, which initially has an arc length to encompass about one-fourth of the circumference of the annular damper window 28, is reduced to two springs that each have an arc length of about one-eighth of the annular damper window circumference.

On the other hand, the present invention as claimed in claim 1 is directed to a damper structure that includes coupling means for operatively coupling corresponding end regions of coil springs, not for engaging a mid portion of a coil spring to divide the spring into two functioning segments. Thus, the claimed damper structure is different from that disclosed in the Kono et al. reference. Additionally, the purpose of the structure that constitutes the present invention, as recited in claim 1, is "upon relaxation of a first coil spring a carrier element operates to simultaneously unload a second coil spring, whereby both coil springs are equally unloaded," which is a purpose not disclosed or suggested by that reference. Consequently, one of ordinary skill in the art and having the Kono et al. reference before him would not be led to the claimed invention.

Claims 2, 4 through 7, 12, 18, and 20 each depend from claim 1, either directly or indirectly, and therefore each of those claims is similarly patentably distinguishable over the Kono et al. reference, and for the same reasons as are given above in connection with claim 1. Additionally, each of those dependent claims contains additional recitations that further patentably distinguish the claimed combinations of elements over the disclosure of the Kono et al. reference.

New claim 21, which depends from amended claim 1, recites further structure to distinguish over the disclosures contained in the references relied upon. None of the references shows or suggests radially outwardly extending entraining members that that extend between a pair of adjacent end region coil convolutions of each spring to cause both coil springs to compress simultaneously and to decompress simultaneously.

Based upon the foregoing amendments and remarks, all the claims as they now stand in the application are believed clearly to be in allowable form in that they are supported by an enabling disclosure and are no longer indefinite. Additionally, the claims as hereinabove amended patentably distinguish over the disclosures contained in the references that were cited and relied upon by the examiner, whether those references be considered in the context of 35 U.S.C. § 102 or of 35 U.S.C. § 103. Accordingly, reconsideration and reexamination of the application is respectfully requested with a view toward the issuance of an early Notice of Allowance.

The examiner is cordially invited to telephone the undersigned attorney if this amendment raises any questions, so that any such question can be quickly resolved in order that the present application can proceed toward allowance.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Alfred J. Mangels', with a long horizontal flourish extending to the right.

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1/8

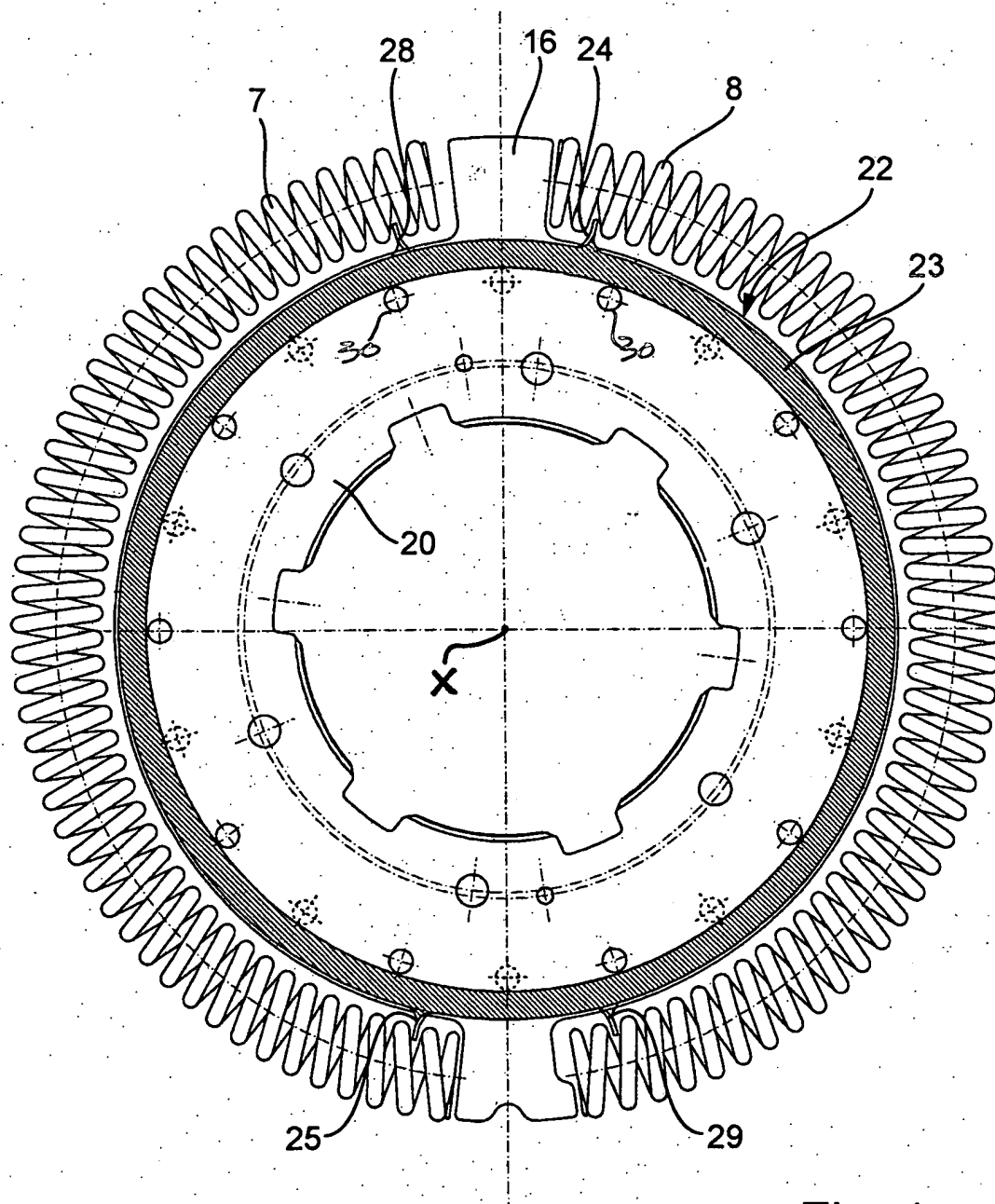


Fig. 1

